

REMARKS/ARGUMENTS

Claims 2 and 6 have been canceled and the remaining original claims have been amended to refer to the connecting member as a connection portion, so as to provide precise terminology. This is not new matter but is supported by description in the specification, for example on page 7, lines 18 – 25, to wit:

It is technically possible to join the bushing 9 to the connection member 10 by welding or the like, but heat of the welding may cause deformation of the resin-made lid 2 at its portion in contact with the bushing 9 and hence cause a gap between the bushing 9 and the lid 2. In order to avoid such a problem, it is preferable to form the bushing 9 and the connection member 10 by casting so as to be monolithical with each other. Of an monolithical part comprising the bushing 9 and the connection member 10, at least a bushing portion is embedded in the resin of the lid 2 in the course of molding the lid 2. (Emphasis added)

As shown by the added underscoring, both the connection member 10 and bushing 9 are referred to as portions of the cast monolith.

Claims 1, 3 - 5, have been amended, and claims 11 – 28 have been added, to refer to distinguishing features of the invention as will be referred to below.

Referring to paragraph 1 of the Office Action, an IDS on the proper form was submitted with the 371 application. See the attached excerpt from PAIR showing submission on November 14, 2004. A copy of the IDS taken from PAIR is enclosed.

Referring to paragraph 2 of the Office Action, applicants have adopted the Examiner's suggestion and the title has been amended accordingly.

Referring to paragraph 3 of the Office Action, multiple dependency has been eliminated.

The rejection of Claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Carter is respectfully traversed. In order to distinguish the subject matter of claim 1, the amendment was made thereto by adding a new feature that the lid has on its top a recess and the at least one auxiliary terminal is located in the recess. This arrangement is advantageous in that the auxiliary terminal does not uselessly occupy a space and a lot of cords connected to the auxiliary terminal are prevented from being laid on the top of the storage battery, thus providing a desirable appearance (Description, page 4 lines 8-12, and page 8 lines 24-27). Carter neither teaches nor suggests this newly introduced feature in claim 1.

The rejection of Claim 4 under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Lopez-Doriga is respectfully traversed. For reasons given above, the combination of the features of claim 4 with the amended claim 1 and any claims depending therefrom is not obvious for the skilled person from Lopez-Doriga and Carter. Accordingly, the rejection on claim 4 under 35 U.S.C. 103 should be withdrawn.

Various combinations of the limitation recited in the original claims were rewritten as independent claims. Specifically, according to claim 13, the lid has on its top a recess and the connection portion is located in the recess so as not to be protruded outward from the top of the lid. With this arrangement, a dead space is not caused on the top of the battery and an excellent appearance can be produced (Description, page 9 lines 8-13). In this regard, Carter discloses a distribution block ("240" and "250" in Fig. 3, equivalent to the connection portion of the present invention), projected outward from the top of the battery, while Lopez-Doriga neither teaches nor suggests the arrangement that a connecting bar or bridge ("7" in Fig. 3, equivalent to the connection portion of the present invention), is located in a recess on the surface of a battery cover ("2" in Fig. 2, equivalent to the lid of the present invention). Accordingly, the subject matter of claim 13 is not obvious for the skilled person even by the combination of these two cited references.

According to claim 23, the connection portion is embedded in the inside of the lid and the connection portion has on its side a ring-shaped protrusion. With this arrangement, the connection portion is not protruded outward from the top of the battery; a dead space is not caused on the top of the battery; and an excellent appearance can be produced (Description, page 9 lines 8-13). Further, the ring-shaped protrusion can prevent a phenomenon, in which electrolyte moves upward through the connection portion (Description, page 4 lines 3-7, and page 7 lines 11-17). In this regard, the distribution block of Carter ("240" and "250" in Fig. 3) is protruded outward from the top of the battery. Furthermore, Carter neither teaches nor suggests a ring-shaped protrusion. Lopez-Doriga discloses the connecting bar or bridge ("7" in Fig. 3), which is apparently embedded in the inside of the battery cover ("2" in Fig. 2), but is not provided with a ring-shaped protrusion (cf. Fig. 3). Accordingly, the subject matter of claim 23 is not obvious for the skilled person even by the combination of these two cited references.

According to claim 24, the connection portion is embedded in the inside of the battery cover and the at least one auxiliary terminal is located in the recess on the top of the lid. With this arrangement, the connection portion is not protruded outward from the top of the battery; the auxiliary terminal does not uselessly occupy a space; and a lot of cords connected to the auxiliary terminal are prevented from being laid on the top of the storage battery (Description, page 4 lines 8-12, and page 8 lines 24-27). In this regard, both cited references neither teach nor suggest this arrangement. Thus, it is not obvious for the skilled person to achieve the subject matter of claim 24 even by the combination of these cited references.

According to claim 25, there is provided a bushing monolithically formed with any one of the main positive and negative terminals; the connection portion the connection portion is embedded in the inside of the lid; and the connection portion has a downwardly extending portion and a horizontal portion, in which the downwardly extending portion obliquely extends from an upper portion of the bushing to the horizontal portion. With this arrangement, the connection portion is not protruded outward from the top of the battery, and it is possible to prevent the occurrence of a clearance between the lid and the bushing embedded in the lid, and hence prevent leakage of electrolyte. Furthermore, it is possible to prevent a phenomenon, in which electrolyte moves upward through the surface of the connection member. Still furthermore, a force applied to a monolithically formed part is dispersed, thereby preventing the bushing, the connection portion or the like from being deformed (Description, page 4 lines 13-24, page 6 line 27-page 7 line 4, and page 7 line 26-

page 8 line 7). In this regard, the both cited references neither teach nor suggest the subject matter of claim 25, particularly the downwardly extending portion. Accordingly, the subject matter of claim 25 is not obvious for the skilled person even by the combination of these cited references.

All the claims depending from these independent claims are also patentable since each independent claim contains a patentable subject matter.

With respect to claims 11, 21 and 27, the feature of “the top of the lid defines a closed peripheral edge of the recess” is not mentioned in the description but is apparent from the drawings. By the recitation of this feature, the present invention is to be more clearly distinguished from the cited references. By this definition, a recess having a stepped configuration in section, such as those shown in the attached copy is excluded. If our proposed expression of this arrangement does not exactly reflect this, please let us have your advice on a proper expression.

Applicants believe that all the claims are in condition for allowance and respectfully solicit a Notice of Allowance.

Appl. No. 10/517,279
Amdt. Dated January 27, 2006
Reply to Office Action of October 5, 2005

The Commissioner is hereby authorized to charge payment of any fees required associated with this communication or credit any overpayment to Deposit Account No. 50-0337. If an extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. 50-0337. A duplicate copy of this paper is enclosed.

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Respectfully submitted,

By 

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